## **Claims**

## 5 1. A compound of formula (I):

$$Z_{1}-W_{1}-CH_{2}$$

$$NH_{2}$$

$$NH_{2}$$

$$NH_{2}$$

$$NH_{2}$$

$$NH_{2}$$

$$NH_{2}$$

$$NH_{2}$$

$$NH_{2}$$

$$NH_{2}$$

wherein

10

20

R<sup>2</sup> is

wherein b is an integer of from 0 to 10;

15  $R^3$  is a  $C_{1-4}$  alkylene or  $C_{2-4}$  alkenylene bridge;

 $W_1$  is absent or represents a spacer moiety which is a  $C_{1-30}$  hydrocarbyl group optionally including 1 to 10 heteroatoms selected from oxygen, nitrogen, and sulphur, and is preferentially derived from glutaric and/or succinic acid and/or a polyethyleneglycol based unit and/or a unit of Formula:

$$-\left\{ \begin{array}{c} H_2N \\ \end{array} \right\} \circ \left\{ \begin{array}{c} O \\ O \\ \end{array} \right\} \circ \left\{ \begin{array}{c} I \\ O \\ \end{array} \right\} \right\} \left\{ \begin{array}{c} I \\ O \\ \end{array} \right\} \left\{ \begin{array}{c} I \\ O \\ \end{array} \right\}$$

Z<sub>1</sub> is an antineoplastic agent, a chelating agent or a reporter moiety.

- 2. A compound of formula (I) according to claim 1, wherein  $Z_1$  is a reporter moiety comprising a radionuclide.
  - 3. A compound of formula (la):

10

wherein

R<sup>1</sup> is either a bond or is

15

wherein a is an integer of from 1 to 30;

R<sup>2</sup> is

20

wherein b is an integer of from 0 to 10;

 $R^3$  is a  $C_{1-4}$  alkylene or  $C_{2-4}$  alkenylene bridge;

the Linker is a C<sub>1-30</sub> hydrocarbyl group optionally including 1 to 10 heteroatoms.

- 4. A compound of formula (la) according to claim 3 in which:
- 5 R<sup>3</sup> is C<sub>1-4</sub> alkylene;
  - a is an integer of from 1 to 10; and

b is 1.

- 5. A compound of formula (la) according to claim 3 or 4 in which:
- $R^3$  is– $CH_2$ -; and

a is 5.

6. A compound of formula (la) according to any of claims 3 to 5 in which the Linker is selected from (II), (III) and (IV):

15

$$-(CH2CH2O)n-(CH2)m-$$
 (II)

$$-(CH2)p-$$
 (III)

$$-(CH_2)_q \qquad N(CH_2)_r \qquad (IV)$$

20 wherein:

n is an integer of 1 to 20;

m is an integer of 1 to 10;

p is an integer of 1 to 20;

q is an integer of 0 to 4;

r is an integer of 1 to 10.

7. A compound of formula (la) according to any of claims 3 to 6 which is:

5

10

15

20

- 8. A compound of formula (I) or (Ia) according to any of claims 1 to 7 for use in medicine, particularly in the *in vivo* diagnosis or imaging, for example by PET, of a disease or condition associated with angiogenesis.
- 9. A method for *in vivo* diagnosis or imaging of a disease or condition associated with angiogenesis which comprises the step of administering a compound of formula (I) or (Ia) according to any of claims 1 to 7 to a human or animal body, followed by generation of an image, suitably a PET image, of part or all of said body
- 10. A radiopharmaceutical formulation comprising a compound of formula (I) or (Ia) according to any of claims 1 to 7 and one or more pharmaceutically acceptable excipients.
- 11. A method of preparing a compound of formula (la) as defined in any of claims 3 to 7 which comprises reaction of the corresponding compound of formula (V):

wherein R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> are as defined for the compound of formula (Ia) and X is a

leaving group selected from chloro, bromo, and iodo, and is preferably chloro; by reaction with the appropriate compound of formula (VI):

- 5 wherein the Linker is as defined for the compound of formula (la).
  - 12. A compound of formula (V) as defined in claim 11.
- 13. A kit for the preparation of a radiofluorinated peptide of formula (Ia) according to any of claims 3 to 7 comprising:
  - (i) a compound of formula (VIa)

wherein L is a leaving group such as p-toluenesulphonate, trifluoromethanesulphonate, or methanesulphonate,

the Linker is a  $C_{1-30}$  hydrocarbyl group optionally including 1 to 10 heteroatoms; R is hydrogen or a thiol protecting group;

and

(ii) an activated peptide of formula (V) as defined in claim 11.

20

- 14. A kit according to claim 13, comprising:
- (i) a compound of formula (VIb), (VIc), or (VId):

25

n is an integer of 1 to 20;

m is an integer of 1 to 10;

p is an integer of 1 to 20;

q is an integer of 0 to 4;

r is an integer of 1 to 10;

L is a leaving group such as p-toluenesulphonate, trifluoromethanesulphonate, or methanesulphonate;

L' is a leaving group such as iodo, p-toluenesulphonate, trifluoromethanesulphonate, or methanesulphonate and when q is 0, L' can be nitro or an iodonium or ammonium salt,

R is hydrogen or a thiol protecting group; and

10

5

(ii) an activated peptide of formula (V) as defined in claim 11.